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The Avicultural Society

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FURTHER SUCCESS WITH THE BROWN TWINSPOT *Clytospiza monteiri*, INCLUDING THE FIRST PARENT-REARED YOUNG

by Andy Chaney

Now that I have finally succeeded in breeding parent-reared Brown Twinspots, albeit just a single brood so far, it is, I feel, a good time to update my earlier account of breeding this attractive African estrildid. My earlier account, members may recall, was published in the *Avicultural Magazine* Vol. 110, No.1, pp.32-35 (2004) and on that occasion all of the eggs were hatched under Bengalese and Bengalese also reared all the young.

After the success I achieved in 2002 and after moving home in 2003 and the subsequent erection of a new birdroom, I was again in a position to plan a breeding programme for my Brown Twinspots.

The new birdroom measures 20ft x 12ft (approx. 6m x 3.6m) and around the internal walls has four banks of cages, which with the use of sliders (slides or partitions) can be subdivided into various lengths or alternatively they can be removed to create a flight cage that runs along three sides of the room. A slider inserted into a corner cage, creates a dark, discreet area, into which the birds can retreat if disturbed.

It was these cages that I put aside for three pairs of Brown Twinspots, one pair being housed in each of the three cages which measured 3ft 4in long x 2ft deep x 1ft 8in high (approx. 1m long x 0.6m deep x 0.5m high). A nest basket was placed on the inside of each of the three cage fronts. They were facing inwards and inside each of them there was a nest which had already been built by some Bengalese that I had in a stock cage. I did this because I had noted on my previous breeding of this species, that I could not get the birds to build their own nests. They would pick up nesting material, but would not build a nest, but merely seemed to move the nesting material around. An inward-facing plastic nest-box was attached to the outside of each cage and this also had a pre-made nest in it.

This time I hoped to get the twinspots to rear their own young. However, I first had to wait for the birds to settle down and lay eggs. It seems from this and my previous experience that this species takes some time to settle into new surroundings. It was almost three months before they started to lay and then, strangely, as in the past, all three pairs laid their first clutch within a week of each other. As I wanted to build up my stock of these birds, I removed the first round of eggs and placed them under Bengalese. There were 17 eggs from which 14 young were reared to independence. Once settled these birds seem to be prolific egg-layers, producing clutches that range from four to seven eggs.

The second round soon followed and I left the pairs to incubate their own eggs and rear their young. Although I found them to be very attentive parents, they failed to get the chicks past a week old. At no time did I inspect the nest or disturb the birds except to feed them. I was able, however, to get a good idea of what was going on, based on my observations of the adult pairs and the experience I have gained over 25 years of bird keeping.

When the third round was laid, I removed two of the clutches and left one with the twinspots. The clutch left with the twinspots hatched successfully and to my delight the chicks were reared to independence. The incubation period for the eggs placed under the Bengalese was 12-13 days, with the young fledging at 21-22 days. In the case of the clutch left with the twinspots I tried to leave well alone, however, from the birds' behaviour I would guess that the incubation period was about the same, with the young fledging a day or two earlier.

Over the past couple of years I have somewhat simplified my softfood mix. It now consists of lkg (2lb 2oz) Cédé Tropical, two packets of wheat germ flakes and ¼ teaspoon Spirulina. This is mixed dry, then cous cous which has been soaked overnight is used in the morning to moisten the softfood mix, to which I then add in frozen buffalo worms and pinkies (but not huge quantities). The surplus mix is refrigerated and used for the evening feed.

During the course of the 2005 breeding season, 41 Brown Twinspots were reared and, although only four of these were parent-reared, I feel that progress is being achieved.

As described above, the Brown Twinspot *Clytospiza monteiri*, has again been bred by Andy Chaney with, on this occasion, four young being parent-reared. This is probably the first such successful breeding of this species in Great Britain or Ireland. Anyone who knows of a previous such breeding is asked to inform the Hon. Secretary.

Andy Chaney, who keeps a collection of estrildids, is a UK member who lives in south Devon.

BREEDING THE SOOTY-HEADED BULBUL
Pycnonotus aurigaster

by Jim Jerrard

In the autumn of 2004, I purchased four Sooty-headed Bulbuls. This species has a black head with a slight crest, white or dusky white cheeks, slightly darker dusky white underparts and a yellow or red vent, depending on the subspecies. My birds have a yellow vent. The upperparts are brownish-grey, with a whitish patch on the upper tail-coverts; the tail has a white tip.

This bulbul is a common and widespread resident in south-east Asia, from Myanmar (Burma) and Thailand eastwards into China and southwards to Java and Bali; it is said (Strange, 2002) to have been introduced onto Sumatra and southern Sulawesi, where it is now well established and has recently been recorded in southern Kalimantan and on Timor. This expansion is thought to have resulted from escaped cage birds. There seems to be some question as to whether or not those introduced onto Singapore continue to survive (King et al. 1976).

Not knowing their sexes, I housed all of my four birds in a flight measuring 9ft x 3ft x 6ft (approx. 2.7m x 0.9m x 1.8m). All went well through the winter months, until the end of February, when I found one bird dead. I left the remaining three birds together, then a week later I found another of them dead. Unlike the first bird which did not have a mark on it, the second bird had been pecked about the head. This led me to believe that the remaining two birds must be a true pair.

In April I put up a nesting tray 7in square x 3in deep (18cm square x 7.5cm deep), into which I had stuffed some hay. In May the two started to build a nest of coconut fibre and lined it with hessian. The first egg was laid May 17th and eventually there was a clutch of three eggs. They hatched on June 1st, after a 12 day incubation period. One chick died the next day, but the other two survived, fed on buffalo worms, fruit flies, small crickets and a little fruit. I ringed the chicks when they were seven days old, using IOA rings size K. Dull replicas of their parents, they left the nest at 13 days.

On June 16th the female laid again. On that occasion she laid a clutch of four eggs. Incubation started on June 19th and after 12 days two of the eggs hatched. The other two were clear. All went well until the chicks were four days old, when the parents deserted the nest. I do not know why this happened, other than that two days before the eggs were due to hatch, I had removed the two young from the first brood. The pair did not nest again.

These bulbuls were more restless and noisy than other species I have bred in the past. On my entering their flight, they soon left the nest and chattered and screeched until I was out of sight. Were they in a larger flight with more cover, perhaps they would have been more successful.

References

King, B., Woodcock, M., Dickinson, E.C. 1976. *A Field Guide to the Birds of South-East Asia.* Collins, St James's Place, London.
Strange, M. 2002. *A Photographic Guide to the Birds of Indonesia.* Christopher Helm, London.

Jim Jerrard is a UK member who lives in South Yorkshire.

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THE AUTUMN SOCIAL MEETING - 2005

On Saturday, September 24th 2005, 50 members and their guests visited Paignton Zoo Environmental Park, Devon. They spent the morning viewing the extensive collection, while Avicultural Society Council Members met in the zoo boardroom. The boardroom houses a full set of the *Avicultural Magazine* dating back to 1894, many of the magazines having been collected by the great Herbert Whitley, who founded the zoo.

After lunch the Chairman of the Avicultural Society, Christopher Marler, presented Curator of Birds and Reptiles Colin Bath with the society's Certificate of Merit for the first breeding in the UK of the Pigeon Guillemot *Cepphus columba*, at the zoo's Living Coasts exhibit at Torbay. Following the presentation there was an escorted tour of the collection, for which members and their guests split into two groups, one led by Colin Bath and the other by Jo Gregson, Senior Head Keeper of Birds.

The bird collection is wide ranging and includes severall species, such as the Socorro Dove *Zenaida graysoni*, Giant Wood Rail *Eulabeornis ypecaha* and the Grey Gull *Larus modestus*, which are not often seen in UK collections. For many, the highlight of the visit was the behind the scenes tour of the new Avian Breeding Centre, from which the Bird Section is run. This large building contains food preparation areas, incubation and rearing rooms, in which members and their guests saw 2005 Paignton-bred Orange-headed Ground Thrushes *Zoothera citrina*, Hooded Pittas *Pitta sordida*, Bali Starlings *Leucospar rothschildi*, Yellow-shouldered Amazons *Amazona barbadensis* and a Grey-winged Trumpeter *Psophia crepitans*.

Paul Boulden
Hon. Secretary/Treasurer

COTSWOLD WILDLIFE PARK
REVIEW OF 2005

by Louise Peat

The past three years have been very busy here on the Bird Section at the Cotswold Wildlife Park, Burford, Oxon., during which time an impressive 24 new species have been added to the collection.

The new species are:
Hamerkop *Scopus umbretta*
Madagascar Teal *Anas bernieri*
Hottentot Teal *Anas punctata*
Turkey Vulture *Cathartes aura*
Delacour's Crested Fireback *Lophura ignita macartneyi*
White-naped Crane *Grus vipio*
Sunbittern *Eurypyga helias*
Southern Lapwing *Vanellus chilensis*
Blacksmith Plover *Anitibyx* or *Vanellus armatus*
Scheepmaker's Crowned Pigeon *Goura scheepmakeri sclaterii*
Pheasant Pigeon *Otidiphaps nobilis nobilis*
Duyvenbode's Lory *Chalcopsitta duivenbodei duivenbodei*
Greater Roadrunner *Geococcyx californianus*
White-browed Coucal *Centropus superciliosus*
Boreal Owl *Aegolius funereus*
Tawny Frogmouth *Podargus strigoides*
Blue-winged Kookaburra *Dacelo leachii*
Blue-bellied Roller *Coracias cyanogaster*
Snowy-headed Robin Chat *Cossypha niveicapilla*
New Caledonian Crow *Corvus moneduloides*
Red Shoveler *Anas platalea*
Baikal Teal *Anas formosa*
Blue-eared Glossy Starling *Lamprotornis chalybaeus*
Red-billed Whistling Duck *Dendrocygna autumnalis autumnalis*

The influx of new species is a result of the park's collection plan, which has resulted in us now having one of the most varied bird collections in the UK. We have been privileged to have received three species on loan. Two of these, a pair of Delacour's Crested Fireback Pheasants *Lophura ignita macartneyi* and a pair of Great Blue Turacos *Corythaeola cristata*, are on loan from Michel Klat. We are very pleased to have Great Blue Turacos back in our collection. This species had been absent from the park since

2000, and the morning chorus had not been the same since then.

The third species, a pair of New Caledonian Crows *Corvus moneduloides*, is on loan from Oxford University, where research is being undertaken into tool use and the intelligence of this species. For a while the pair was housed in an aviary in the Walled Garden, but despite attempts by keeping staff to offer more cover, the pair never really settled in this aviary. The pair is now in an off-show aviary, where keepers can concentrate on breeding this crow in a more settled environment.

Another new species of special note is the Greater Roadrunner *Geococcyx californianus*. In the UK, only Banham Zoo and the Cotswold Wildlife Park currently hold this fascinating species. Our male was bred at Banham Zoo and it took us over a year to locate a female. She came from Tierpark Berlin and within months of arriving here began laying eggs, but all proved infertile. Unfortunately, this female died suddenly in July 2005. We were able to obtain an unrelated female from Vogelpark Marlow, and hopes are high that we will succeed in breeding this species this year.

Early in 2004, a male Blue-winged Kookaburra *Dacelo leachii* arrived from Rotterdam Zoo. So far though we have failed to locate an unrelated female to pair him with. All of the 18 birds known to be held in UK collections are related and can be traced back to the original Rotterdam birds. The situation is not much better in the rest of Europe. We are now monitoring this species on behalf of EAZA (European Association of Zoos and Aquaria) and hope that new bloodlines may be able to be sourced from Australia.

Highlights of 2005 breeding season

Two male Black Storks *Ciconia nigra* were parent-reared in 2005. It was the third year in a row our Black Storks have successfully reared their own young. Over the years we have been very successful with this species. Our offspring have been sent to six other collections in the UK. Early in 2005, Edinburgh Zoo organised the import from Denmark of four unrelated birds. These have been distributed among four collections including our own, to be paired with some of the birds bred at the park. Using the knowledge and experience we have gained, we hope to encourage this second unrelated pair of birds to breed here in the park.

Our flock of Chilean Flamingos *Phoenicopterus chilensis* had its best breeding season to date, with 10 out of the 12 chicks that hatched being reared successfully. We are going from strength to strength with this species. During a two year observational study of our flock we have collated much needed information on nesting behaviour, which has given us a better understanding of these unique birds. During the study, some interesting behaviours were observed, including same sex egg and chick ‘napping’ and 'trio' pairing.

After seven years of keeping the Masked Plover *Vanellus miles miles*, we bred this species for the first time in 2005, with three young being produced. We believe the success was due to subtle changes the keepers made within the aviary. On the back of this success a new area in the walk-through enclosure in the Walled Garden has been built by the keepers. It offers a much improved environment for our two species of plover, and allows space and suitable conditions to bring Pied Avocets *Recurvirostra avosetta* back into the collection.

In November 2004 we received a pair of Scheepmaker's Crowned Pigeon *Goura scheepmakeri sclaterii* from Cologne Zoo, Germany. The pair was placed in our recently renovated Tropical House. The pair settled in extremely well, despite the female having a problem with one of her legs, resulting from a break or some other injury that causes her to walk with a slight limp. In September 2005 the pair successfully reared a chick. It was the first recorded breeding of this species in the UK.

Other species that have done well in the Tropical House include a pair of Blue-bellied Rollers *Coracias cyanogaster*. The conditions in the house seem to be particularly conducive for this species, for not only have the adults thrived but last year they produced four young from two clutches. There has been conflict between the rollers and a pair of Red-crested Turacos *Tauraco erythrolophus* and, as the turacos have failed to breed in the Tropical House, they will be moved elsewhere. The general feeling is that the Tropical House holds too many distractions for the turacos, which is why they have failed to show any breeding behaviour since they were moved there.

Our group of Speckled Mousebirds *Colius striatus* produced a total of 20 chicks in the Tropical House, all of which were eagerly snapped up by other collections. We have high hopes for our pair of Pheasant Pigeons *Otidiphaps nobilis nobilis* which last year produced 10 clutches of eggs, many of which were fertile but failed to hatch. The keepers have tried several techniques in order to achieve success. These have included foster and artificial incubation and placing dummy eggs under the pigeons until their own eggs had started to pip when they were returned to them, but so far our efforts have failed. However, we hope our persistence will eventually pay off.

Our group of Wonga Pigeons *Leucosarcia melanoleuca* continues to be productive. Last year a total of three chicks were parent-reared or foster-reared. We have finally obtained a second pair of these pigeons and once this pair has settled and started to breed, we hope to create some unrelated pairs which we can distributed to other collections.

In October 2004 we received six White-browed Coucals *Centropus superciliosus* from Parc Paradisio, Belgium. Three of these were placed at

Exmoor Zoo in Devon and bred there. It is the first record of this species having bred in the UK. Unfortunately, in February last year we lost one of our trio. However, the remaining two proved to be a true pair and laid fertile eggs, one of which was successfully hatched and the chick hand-reared. Later in the year the pair went on to successfully rear four young. We are currently keeping the birds as a family group.

In June three fertile eggs from a pair of Purple Glossy Starlings *Lamprotornis purpureus* were received from a private collection. They were placed in the nest of a pair of Red-winged Starlings *Onychognathus morio* and the pair incubated the eggs and managed to rear one chick, which is now with our group of Purple Glossy Starlings.

Among other species successfully reared in 2005 were Black Curassow *Crax alector*, White Stork *C. ciconia*, Humboldt Penguin *Spheniscus humboldti*, Striated Caracara *Phalcoboenus australis*, Boobook Owl *Ninox novaeseelandiae*, Crested Pigeon *Ocyphaps lophotes*, Himalayan Monal *Lophophorus impeyanus*, Temminck's Tragopan *Tragopan temminckii* and Black-headed Weaver *Ploceus cucullatus bohndorffi*. In all, 37 species produced young, with 31 of these species successfully rearing a total of 127 young.

Plans for the future

In January 2006 we received two male Guira Cuckoos *Guira guira* which, like the male Greater Roadrunner, were bred at Banham Zoo, Norfolk.

The Walled Garden is about to have a face-lift. Its layout has changed little over the past 35 years and even though enclosures have been rebuilt, improved and extended sometimes, the overall layout has generally remained the same. Our new approach to this area is to move some of the aviaries away from the perimeter walls in order to create a more interesting route for visitors and allow us to create better environments for the animals. The remodelled area will include new aviaries, a carp pond and a heated pond for our giant water lilies, all surrounded by exotically planted border.

The first phase of this project was completed earlier this year (2006) and included the rebuilding and enlargement of our Great Hornbill *Buceros bicornis* enclosure, which now includes an arched, netted canopy, offering the birds greater height.

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THE CHESTNUT-BELLIED SEED-FINCH *Oryzoborus angolensis* IN THE WILD AND IN AVICULTURE

by Robin Restall

Introduction

The Chestnut-bellied Seed-Finch, also called the Lesser Seed-Finch, is widespread across tropical South America east of the Andes. It has a very attractive song consisting of various melodious trills and warbles, usually recognisable despite many variations. Despite being widespread and potentially common, its singing ability has made it a victim of bird trappers and as a result it is rare or uncommon to locally common at best. Most of the birds are trapped for the South American market, this species only occasionally occurs in aviculture in Europe and North America and there is little if anything of value about it in the avicultural literature outside of Brazil. It is subject to considerable variation in size and plumage, and being comparatively easy to breed in captivity, is known to have several plumage variants. It has also hybridized with several other finches.

Habitat

In Colombia the Chestnut-bellied Seed-Finch is found at woodland edges, on wasteland and in shrubbery. In Guyana it may be found in swamps and abandoned previously cultivated forest clearings and also in partly grassy and partly cultivated clearings in and near the edge of forests. In Surinam it is said to occur on sandy ground at the edge of forests and at the edge of plantations. In French Guiana it is a bird of secondary growth and open country bordering large forests. In Ecuador it is found in shrubby clearings that are usually not grassy and tends to avoid areas of intensive agriculture. In Brazil it is primarily a bird of undisturbed wet grassland and is a typical species of riparian thickets and thick bush alongside rivers in the *cerrado.* It is also said to be found in the *burrizales*. These are wet swampy grasslands with grasses up to 2m (6ft 6in) tall, scattered with Moriche Palms. These also occur in Venezuela where they are known as *morichales*. Mention has been made of the Chestnut-bellied Seed-Finch inhabiting pastures and areas that are densely bushy near water in Argentina. Here in Venezuela it is found it in a variety of habitats, it is said to occur in shrubby forest clearings and grassy forest borders and I have encountered it in habitats ranging from montane forest in Táchira to open savannah in southern Bolívar State. In Táchira I netted a male in dense montane second growth woodland not far from a path and river and several kilometres (miles) from open grassland. It appeared to be travelling through the woodland in the direction of an open area. It seems that most sightings of the bird are in areas not far from water or wet areas.

Food and feeding

It is apparently vegetarian, however, the stomach of one individual contained insect fragments. It may often be found foraging singly but has also frequently been seen feeding in loose congregations of seed-eating birds in open areas. On the Gran Sabana in Venezuela I have found it foraging with other seed-eaters - *Sicalis* grassland finches, *Zonotrichia* sparrows and different *Sporophila* seedeaters - on open grassland that had been burned recently and which was still smouldering. This area was not far from running water. Favourite seeds of this species in Brazil, include those of the sedges *Tiririca*, *Cyperus rotundus* and the *navalha-de-macaco*, *Hypolytrum schraderianum*. In Guyana it was seen feeding exclusively on *Scleria pretensis* sedges. It seems to me that it is primarily reliant, if not dependent, on seeds of sedges (family Cyperaceae). It is also one of several seed-eaters observed feeding in *Cecropia* trees, eating at the fruits and also taking Müllerian bodies from the leaves, petioles and stems.

Variation in *O. angolensis*

The following analysis is based on a series of 118 specimens in the Colección Ornithológica Phelps in Caracas, Venezuela, occasional sets of measurements taken opportunistically during visits to various other collections over about 10 years, observations on live birds captured during field-work and seven live birds observed under controlled conditions over three years, together with an extensive search of the literature.

Bill, colour, shape and size

Juvenile birds, that is birds that have not yet had their first body moult, have a bill with a curved culmen, not unlike that of a *Sporophila* in character. The bill is large and apparently no different from that of an adult, but a qualified comparison of 18 specimens showed that they are on average 10% smaller in all dimensions. A typical set of measurements is: exposed culmen average 11.5mm, with a range 10.5mm-13.6mm; height of bill from base of mandible to highest point of exposed culmen average 11.2mm, with a range of 10.0mm-12.6mm; width across the base of the mandible average 9.7mm, with a range of 9.1mm-10.7mm. The bill is dark brown, usually with some horn-colour infused, especially at the base and along the cutting edges. The bill is smooth, without ridges or grooves. It becomes increasingly blackish as the bird matures.

By the time the bird is in immature plumage, that is between the first body moult at four to six months of age and the first full moult at 10-12 months, the bill has begun to change shape, with the base of the culmen swelling and rising, thus giving the culmen a flatter appearance. In addition the base of the culmen begins to extend back along the skull in the form of a narrow strip (Fig.1). The process of change is greater in males than females at all ages, but in the immature the comparison is more noticeable and the shape of an immature female's bill may seem exactly like that of a juvenile.

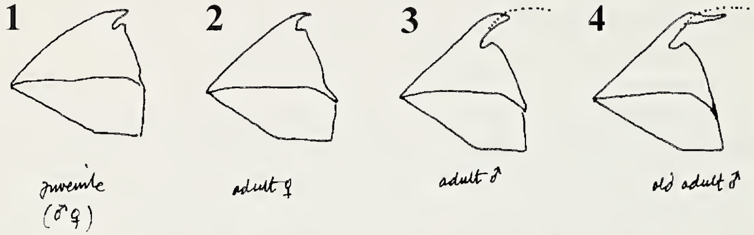


Fig.1. Examples of how the bill varies according to the age of the bird.

1. **The juvenile has a slightly curved culmen that is the same in the male and female.**
2. **The adult female has a flattened culmen.**
3. **The adult male has a flattened culmen that begins to swell at the base and extend backwards.**
4. **The culmen usually extends further back in old males.**

The bill of the adult female (from 21 specimens) typically measures: exposed culmen average 13.15mm, with a range 11.6mm -14.5mm; average height 11.7mm, with a range 10.7mm-13.25mm; width across base of bill average 10.1mm.

There is an enormous variation in bill size among adult males. This is possibly age related, but one of the largest bills I found was that of a bird that was just finishing its first full moult, thus it was only about a year old. Two individuals that had been in captivity for several years, both had fairly modest sized bills. I do not know at what age the bill stops changing shape, but it seems it may take a couple of years or more. In the two main aspects of the adult bill, i.e. size and shape, the latter appears to be more age related. The growth of the narrow strip from the peak of the culmen back along the skull (Fig.1) is part of this ageing process, for I have failed to find it in young adult males regardless of the size of their bills.

The range of bill sizes is quite amazing. On a total size basis, measuring the volume of the bill in cubic mm (Restall, 2002), the smallest of 78 adult males measured 167 cubic mm and the largest 379 cubic mm. Thus the largest bill was more than double the size of the smallest. Adult males had the following bill measurements: exposed culmen average 13.25mm, with a range of 11.1mm-14.65mm; average height 11.8mm, with a range of 10.0mm-14.0mm; width of bill at base average 10.2mm.

There are at least three possible explanations for the variation in the size of the bill. The first is sexual attractiveness. The *Lonchura* munias of the Asia-Pacific region are in many ways the Old World analogue of *Oryzoborus*. I found at least in the subgenus *Munia*, larger bills are a bigger attraction to females, conspecific and congeneric, whether already paired or not, and apparently are a strong sexual stimulant (Restall, 1996). It could be that *Oryzoborus* males with larger bills attract females and may well mate with birds that are paired to other smaller-billed birds. The principles of this phenomenon are well known among many families of birds.

The second possible explanation is that a group of distinct-size-billed birds might in fact be a cryptic species but this would almost certainly have to be tied in with some other equally distinct characteristics such as longer tarsi, or a plumage character, as in the case of the Ring-necked Seedeater *Sporophila insularis* (Restall, 2002). I have not found any natural grouping of figures within the data for the Chestnut-bellied Seed-Finch that would support such a hypothesis.

In Africa the *Pyrenestes* seedcrackers have a similar, over-sized, sharp bill like that characteristic of *Oryzoborus*. Chapin discovered in 1924 that there is a considerable range in bill sizes and that they fall into three clearly definable groups without intermediates. Smith (1991, 1993) subsequently discovered this is trophic polymorphism, associated with feeding. The phenomenon is known in Neotropical ornithology where, for example, in the case of the Hook-billed Kite *Chondrohierax uncinatus*, birds with different sized bills feed on different sized snails. In the case of the Black-bellied Seedcracker *P. ostrinus*, each different bill morph feeds on a different species of sedge, and what separates the sedges is the size and hardness of their seeds. Apparently, it is the width of the mandible at the base that most determines the strength of the bill as a seed-cracking tool (Smith, 1993). Smith worked for two years studying *Pyrenestes* seedcrackers in the field in Cameroon, West Africa. This was complemented by the shipping of 97 birds to a special special purpose-built breeding complex at Riverbanks Zoo, South Carolina, USA. There they were bred to three generations and the bill morph genetics were worked out. Until something of this order is conducted with the Chestnut-bellied Seed-Finch, the possibility that it is a trophic polymorph, must remain hypothetical. As it is, I have not been able to place bill measurement data into any grouping that might support this hypothesis.

Moult and plumage variation

Between the juvenile and immature stages there is a small but distinct change in plumage coloration. This is most noticeable in males, but as with the bill change, it can be the same in both sexes. With the first moult, the upper surfaces become a denser, more intense and slightly darker brown, while the breast and underparts become a richer, more rufous brown.

The male's moult into adult plumage tends to follow the pattern of first the head, nape and upper breast showing some small black feathers. Then, the wing-coverts, especially the median and greater, start to change, beginning with the innermost feathers. The tertials drop within the somewhat random body sequence. The wing feathers typically start moulting from the middle, with the first primary and the innermost secondary and gradually moving towards the outermost primary and the innermost secondary. The tail starts with the outermost pair of feathers. This is the general pattern, but there appears to be a haphazard element as well, with some feathers being dropped and re-grown without any sequence.

The adult male, but not the juvenile nor immature male, has a highly variable white speculum at the base of the inner seven primaries and usually all of the secondaries. I have never found white on either of the outermost two primaries, although occasionally the seventh is without white. The white is on the leading edge of the six inner primaries, but on the trailing edge of all the remiges except primaries eight and nine. The white is always visible when the bird is in flight, but it is very variable in size and can vary from a narrow strip to a broad band. When the wing is folded, the white may be visible as a large white patch, or may be completely hidden, giving the appearance of an all-black wing. There is no apparent correlation between the amount of white and the size of the bill or the size of the bird.

The underwing of both sexes in all plumages is pure white. This may extend up over the inner bend of the wing of the adult male and show as a white patch at the shoulder and is sometimes quite bold. There are also irregular white patches that occur at random. I have twice seen a bird with a pair of matched white throat patches, and a bird with a white patch central on the throat. Another had white on the scapulars, while yet another had white edgings to the median wing-coverts and along the flanks. I have also seen a bird with a white coronal line. Other sports have also been seen and recorded. In every case that I have seen, the bird was otherwise perfectly normal, and I have never seen a case where mixed breeding might explain the presence of the white. There have been a few cases where the pattern of black and brown on the breast has varied. All-black birds have been recorded that have been totally melanistic, even lacking white on the bases of the remiges.

There are three colour variants with different coloured breasts. The common or basic colour of the breast is chestnut, but with some birds this is a deeper more intense bay colour and with some others it is a brighter, lighter, burnt sienna. In the large series I studied, about 20% of the old males had a bay coloured breast while about 10% of the birds had a burnt sienna coloured breast. The under tail-coverts are typically chestnut with the outer edge of the feathers being black. However, there are variations from all-chestnut to all-black (see plate p.17 for examples).

Finally, the males vary considerably in total length – never a scientifically reliable data - but an indication of variability nonetheless. Adult males varied by some 20%, from 125mm-150mm.

Mutations

Various mutations have appeared in the wild, and a concentration of birds either showing or carrying mutant genes in captive populations means that they occur in considerable numbers of breeders' stocks. A breeder of *Oryzoborus* in Brazil, Araújo Flecha (1987), described the mutations in his collection and how some were related. Mutants owned by this breeder included all-black males, white males, cinnamon (presumably on the belly and undertail), slate and ash (presumably instead of black and chestnut), as well as harlequin males. Among females listed by him were light and dark cinnamon, ash and a shade of ash that was almost green (presumably very olivaceous), and white. He listed all-black males with yellow bills and all-ash females with yellow bills. The mutations appear at random and it seems that the genetic characters have not yet been worked out. Evidence of this was offered by the mention of a cinnamon male that sired an ash son.

Correlation between the variables

With the exception of bill shape, there appears to be no correlation between any of the variables. Larger birds do not necessarily have larger bills, birds with more white in their wings may be old or young, young birds may have large bills and old birds may have small bills. Variation of body colour is independent of any other variable.

The Chestnut-bellied Seed-Finch in aviculture

Trade

The trapping of Chestnut-bellied Seed-Finches occurs throughout the species' range. A calling or singing male is used to lure the birds to where they are trapped. Sometimes the cage containing the calling or singing male has several sticks painted with sticky gum attached around the outside. Birds lured to the cage containing the calling or singing male perch on these and become trapped by their feet and/or plumage and are unable to escape. They are pulled free by the trapper and cleaned with vegetable oil. At other times they are trapped in baited cages or in mist nets. This cheerful and accomplished songster is a great favourite among Brazilian bird keepers. Trapping is a widespread and major industry and buyers travel to Venezuela, Guyana and Surinam to buy birds to take back to Brazil. In Venezuela (where incidentally, trade in wild birds is illegal, a fact almost totally ignored by the authorities and virtually encouraged in rural areas) there are few dedicated trappers of this species, the birds being caught only opportunistically (the Large-billed Seed-Finch *O. crassirostris* is much preferred by local songbird keepers). Wholesalers sell newly-caught young birds to their regular customers for the equivalent of about £2 (US$3.50) each. They will hold them if they have an advance order from Brazil. Fine adult males in full song can sell for the equivalent of several hundred pounds or several hundred US dollars in big cities. In Guyana there maybe a dozen

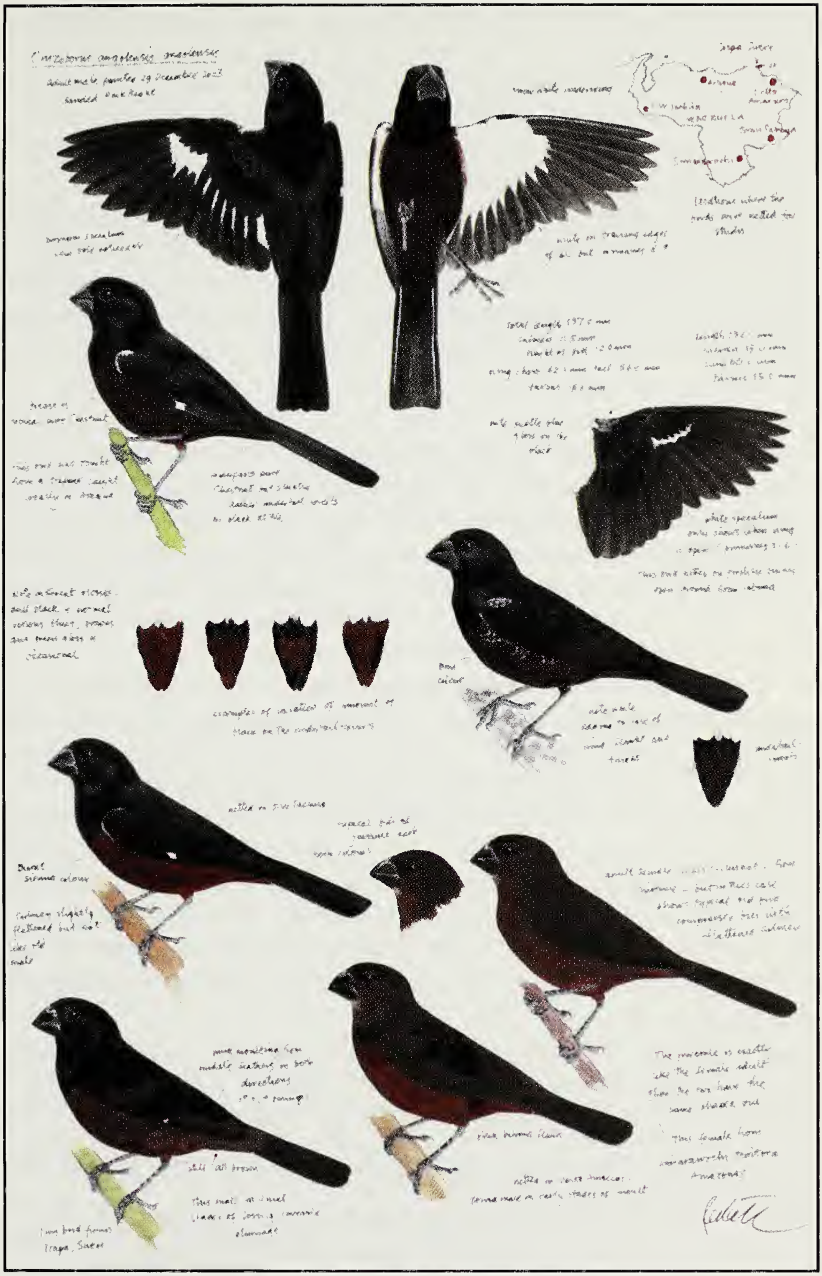
(12) villages in which several men in each village earn their living by trapping the seed-finch. They earn the equivalent of about £1(US$1.75) for each bird, and maybe catch two or three a week. Generally they keep young males and release females and old males. The newly-caught birds are fed with bunches of sedges and grasses, they are known to feed on locally and are gradually introduced to hard dry seeds. The birds go to Georgetown where they are bought locally and a few occasionally get into the international trade to countries such as the Netherlands and the UK, by which time their price has increased by about 1,000%. Birds that have proved to be strong songsters go to expatriate Guyanese living in New York and a few other locations. Competition winners may be sold for several thousand US dollars each.

Breeding

The Brazilians have developed their breeding skills well. Their recommended technique is to place a female in a standard breeding cage measuring maybe 1m x 0.5m x 0.5m (approx. 3ft 3in x 1ft 7¾in x 1ft 7¾in) until she steadies down. A fit male is then placed in a small cage hung on the outside. He remains there until he is singing to the female regularly and it is apparent that she has accepted him. This process can take a few weeks. A canary nest pan is hung inside the cage, on the wire front, to one side. It is screened by a bunch of leaves (e.g. *Ficus benjamina*) placed against the nest pan on the outside of the cage. The male is subsequently introduced into the cage. They are fed a variety of seeds, fresh lettuce and fresh growing grasses and sedges. When young are in the nest, livefood is offered, but few birds take it. They are also offered canary rearing food.

Song

The song of the Chestnut-bellied Seed-Finch is usually described as being "melodious with trills", which hardly explains why it is the favourite songbird kept in captivity in South America. In fact the song can be a very pleasant and pleasing continuum of warbles and trills, the equal of, or surpassing that of a song variety of canary. The birds learn vocabulary and can be taught different singing techniques. In one year alone, in just five states of Brazil, there were 38 singing competitions held just for this species. Like the song of the domestic canary, its song has many variations that become fine tuned among birds in captivity. Specialist breeders in Brazil keep other songbirds out of earshot of the new youngsters, unless it is intended that elements of their song are incorporated into the young bird's fast-growing repertoire. Of course, as with all songbirds, there is an innate song, but in addition this species has a great propensity for learning, acquiring twists and phrases, alternative techniques and simply getting better with practise. Purists take the subject very seriously and try to keep the songs of their birds within the group of songs pertaining to the species, as do canary song



Examples of plumage variation in *Oryzoborus angolensis*.

specialists in Germany. Young birds may be kept in the company of competition winners, so-called master singers, and may be exposed to the repeated playing of recordings of the songs of great songsters. There are competitions in which these birds sing and are judged. The types of song recognised have names such as Classical, Seaside, Viviteteo, Repetitions, Black Stream and another is called Iron Lungs!

It must be obvious that birds caught young and raised in captivity in the company of many songbirds and those deliberately exposed to other singing species, will develop wider vocabularies than birds in the wild, where parental influence is dominant. It is equally certain that having an element of song from another species in its vocabulary is no evidence of hybrid origin of the individual.

Implications for aviculture

The Chestnut-bellied Seed-Finch is undoubtably on the decline in the wild and this is exclusively due to trapping for the cage bird trade. The demand in Brazil is considerable. It is the Brazilians' favourite songbird. To the credit of Brazilian bird keepers, it is increasingly being bred in captivity there and is on the road to domestication. The appearance of mutations is a great help in giving momentum to this. However, it is unlikely to happen as long as birds continue to be supplied from the wild.

The trappers in Guyana all say that they have to travel farther than they used to in order to find this species. Whereas as recently as five to 10 years ago, birds were being caught within the village boundaries, trappers now have to travel for two days or more to get to where they may be found. Here in Venezuela they are no longer regularly available at wholesalers' premises, but become available only occasionally. In my judgement, this species is heading for endangered status and the few birds that appear on the market in Europe will soon be memories from the past. There is a real opportunity for European aviculturists to follow the example of Brazilian aviculturists and work towards domesticating this most desirable and rewarding songbird.

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HAND-REARING A SPANGLED COTINGA *Cotinga cayana*

by John E. R. Francis

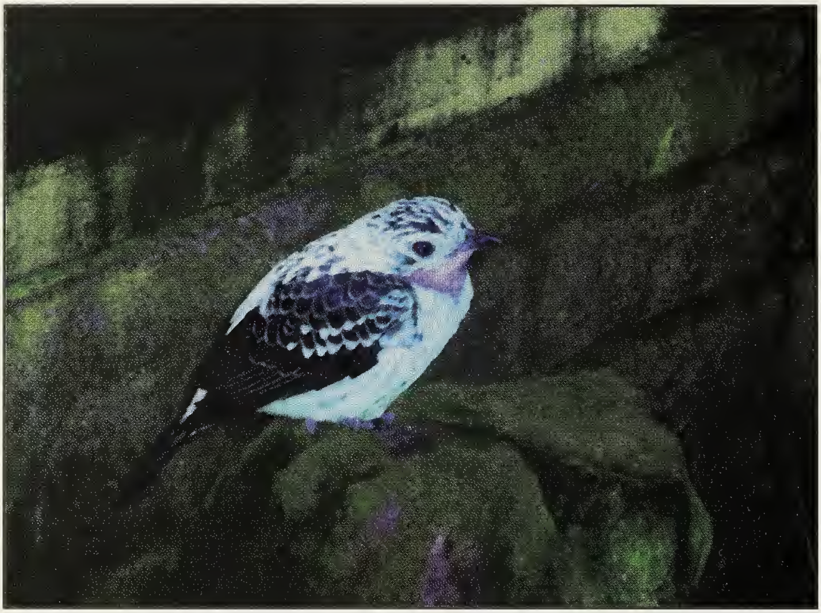
The Spangled Cotinga is a member of the Cotingidae family. It is found in lowland tropical forest in northern South America, in Colombia, Venezuela, the Guianas, Brazil, Perú and Bolivia. It measures about 20cm (approx. 7½in-8in) in length. The male is shining turquoise blue, with black scollops showing on many of the feathers. His throat is purple-red and his wings and tail are black. The female is greyish-brown with pale scaling on the breast.

In 2002, I purchased a pair of Spangled Cotingas from C.J. Birds. Not much happened in the first year, but in 2003 the female started to carry nesting materials. She chose a *Clerodendrum* sp. on which to build a very sparse nest in which she laid her single bluish-grey egg with brown mottling. Unfortunately, the egg fell through the nest and smashed on the ground. After several more mishaps I decided to replace the *Clerodendrum* with a small evergreen shrub which I dug up and fixed upside down with the roots spread out in a cup-shaped fashion. She took to this straight away and proceeded to lay a few pieces of nesting material in the base of the roots.

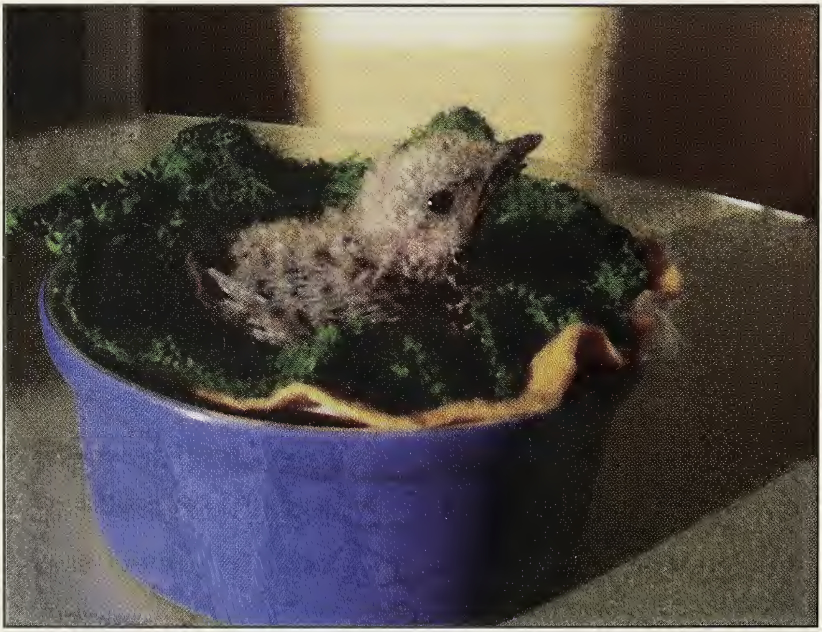
The first egg laid hatched after 23 days. The female would only feed the chick with waxworms. All seemed to be going well until the chick reached 28 days, when it developed breathing problems and, unfortunately, 24 hours later it died. On two further occasions a chick was hatched successfully. Again the female would only feed them waxworms. On these two occasions I injected the waxworms with vitamins and minerals, etc., but both chicks died.

Then tragedy struck when the male escaped and was never seen again. So I returned to C. J. Birds to see if Phil Cleeton could get me another male, which luckily he succeeded in doing. This new male was hated by the female, which chased him non-stop around the aviary. After several clear eggs had been laid one hatched on June 12th 2005, after an incubation period of 21 days. When the chick was seven days old, I made the decision to try to hand-rear it. I searched the internet and scoured the available bird books, but much to my dismay I could find nothing whatsoever on hand-rearing a cotinga chick.

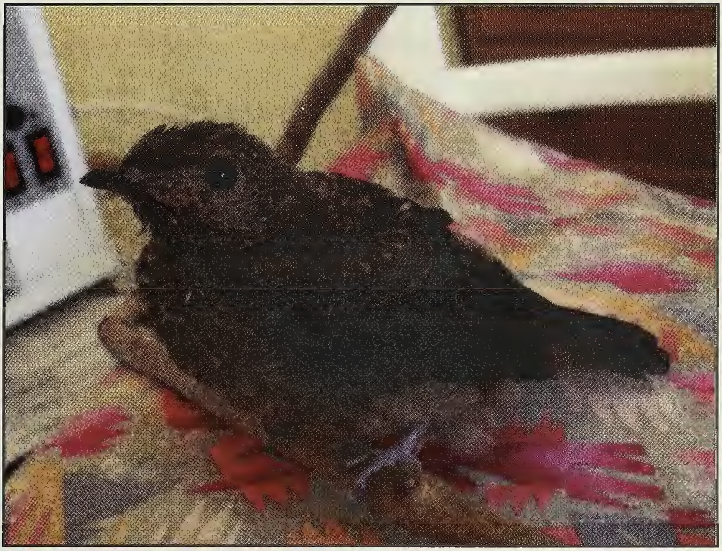
On being removed from the nest, the chick was immediately placed in a brooder set at a constant temperature of 32°C (89.6°F) for the first two weeks, after which the temperature was reduced by one or two degrees each week. (The ambient temperature in June-July 2005 was quite hot). At this stage the chicks eyes were still closed, which made feeding it extremely difficult, especially as it was unwilling to open its beak to be fed. A matchstick with a spade-like end was fashioned and used to prise open its beak. The beak



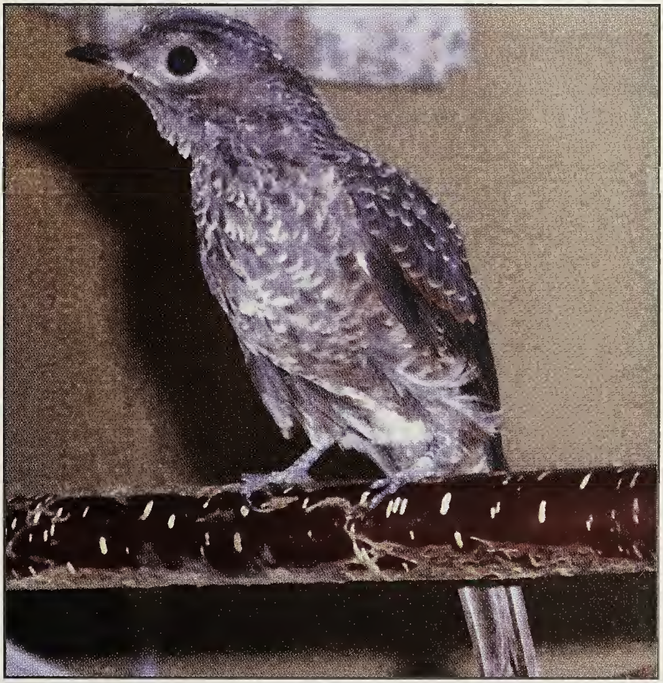
Adult male.



Fifteen days old.



Twenty-four days old.



Five months old.

was very soft, so this was performed with great care for fear of damaging it. At the beginning, it was extremely difficult for one person to manage this on their own and my wife's help was invaluable.

The first few days it was mostly trial and error, as we had no idea how much and how often we should feed the chick. However, eventually we were able to establish some sort of routine. We started by feeding it approximately every two hours from 6.00am-9.00pm (06.00hrs-21.00hrs). The main foods fed to the chick were:

pinky mice cut into 1mm-2mm slices and soaked in a solution of water to which had been added four drops of Abidec
waxworms
crickets
blueberries
pawpaw (papaya)

We used a small pair of tweezers to feed the chick. Each offering of food was first dipped in the Abidec solution, then lightly coated with SA-37 intervet powder and then dipped into a parrot rearing formula, which we had mixed with water to make into a thick paste. Mealworms were added to the diet at approximately two weeks.

On a typical day during the first week the chick received:

6.00am (06.00hrs)	2 slices of pinky 1 waxworm 2 x ¼ blueberry	2.00pm (14.00hrs)	1 cricket 3 waxworms 2 x ¼ blueberry 2 cubes of pawpaw
8.00am (08.00hrs)	2 crickets 1 waxworm 2 x ¼ blueberry 2 x 5mm cubes of pawpaw	4.00pm (16.00hrs)	2 x ¼ blueberry 2 slices of pinky 2 cubes of pawpaw
10.00am (10.00hrs)	3 waxworms 2 x ¼ blueberry 2 cubes of pawpaw	6.00pm (18.00hrs)	2 slices of pinky 2 waxworms
12.00am (12.00hrs)	1 slice of pinky 1 waxworm 2 x ¼ blueberry 1 cricket	9.00 pm (21.00hrs)	3 waxworms 2 crickets 2 x ¼ blueberry

At four weeks old the chick was fed:

6.30am (06.30hrs)	2 waxworms 2 slices of pinky 2 crickets 2 cubes of pawpaw 2 x ¼ blueberry	3.00pm (15.00hrs)	4 slices of pinky 2 crickets 4 x ½ blueberry 2 cubes of pawpaw 2 waxworms

8.30am (08.30hrs)	2 slices of pinky 2 crickets 2 cubes of pawpaw 2 x $^{1}/_{2}$ blueberry
10.30am (10.30hrs)	2 slices of pinky 2 crickets 2 cubes of pawpaw 2 x $^{1}/_{2}$ blueberry 1 mealworm
1.00pm (13.00hrs)	3 slices of pinky 3 crickets 2 mealworms 3 cubes of pawpaw 3 x $^{1}/_{2}$ blueberry
5.30pm (17.30hrs)	3 slices of pinky 3 crickets 3 cubes of pawpaw 3 waxworms
8.00pm (20.00hrs)	2 crickets 2 mealworms 2 waxworms 7 cubes of pawpaw 2 x $^{1}/_{2}$ blueberry

The chick first opened its eyes at approximately two weeks old, it also started to regurgitate undigested food in the form of pellets. At 26 days old the chick flew across the bedroom in which it was being reared. At 33 days it started to take food from the dish.

When the chick was 36 days old, it was noticed that its breathing had become laboured and a slight clicking sound could be heard coming from its throat. Baytril - one drop in the morning and one drop in the evening for five days – was administered directly into the chick's beak and, fortunately, this did the trick. The chick was successfully persuaded to drink water by floating a mealworm on the top of it.

At the time of writing (late 2005), the young Spangled Cotinga is nearly six months old and is fit and well. It will not be possible to sex it until it has reached maturity, which could take up to a year.

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John and his wife have now raised three young Spangled Cotingas and the female is sitting on another egg. The cotingas are, he wrote, kept in a small tropical house heated to a temperature of 55°F-60°F (12.8°C-15.6°C), with the birds having access to an outside flight all year round. They share the accommodation with a number of other species, namely Blue-winged Leafbird Chloropsis cochinchinensis, White-throated Bee-eater Merops albicollis, Rufous-bellied Niltava Niltava sundara, Egyptian Plover or Crocodile Bird Pluvianus aegyptius and a pitta Pitta sp. - Ed.

BREEDING THE ST VINCENT PARROT *Amazona guildingii*

by Henry Quinque

My childhood passion - still intact today - for all forms of life, some scientific rigour and a fair amount of luck have enabled me to achieve some notable breeding results.

To think that some bird is fancier or more endearing than another is definitely subjective yet no aviculturist can escape this feeling. I admit willingly to this failing and it was thus that for decades amongst the species I most longed for was the St Vincent Parrot.

History

This dream took time and infinite perseverance to achieve, while all the time this wonder of nature was facing extinction.

Our association had to negotiate for five long years before we managed to obtain the birds. The miracle happened in the form of a convocation by the Government of St Vincent & the Grenadines that it was ready to place on loan with us St Vincent's emblematic parrot.

There, before the media, the minister in charge handed us four St Vincent Parrots. The next day in the government newspaper it was explained that the loan of these parrots was in the interest of the survival of the species, almost wiped out by the eruption of the Soufrière volcano in 1979. The opposition newspaper did not publish any photographs of the event and accused the government of squandering the country's assets to the profit of incompetent foreigners.

Eventually, after overcoming more unforeseen administrative hurdles we reached France and put away the 5kg (11lbs) of letters and documents that had been accumulated during the lengthy negotiations.

Selection of the pair

After a period adapting to their new surroundings, we had our four birds DNA-sexed and discovered that only one of them was a female. All large parrots have strong personalities and feelings one must be attentive to. Thus, it took us three seasons, during which the female laid infertile eggs, to form a compatible pair. Finally, the female accepted a male which was very mobile, flew well and was very attentive.

After three months in adjacent cages, we put the two birds together at the beginning of January. We saw the first mating on March 29th 2004. It is similar to that of the macaws, i.e. the male does not mount the female but the fairly long copulation takes place with the birds side by side.

Behaviour

The birds have 12m (approx. 39ft) of flying space in the aviary which is linked to a heated shelter. We set up one nest-box outside and one inside. The boxes are custom-built for these large Amazons, with a 70cm x 70cm (2ft 3½in x 2ft 3½in) square base and are 150cm (4ft 11in) in height. The bottom of the boxes have a layer of wood chips and strips of wood are nailed on the inside at the level of the birds' beaks. The boxes are set 2m (approx. 6ft 6in) high. Each is equipped was a camera linked to a monitor in the service corridor of the building.

After a careful inspection of both nest-boxes, during which they put their heads inside but did not enter the boxes, the birds chose the box inside the shelter. The male enters the box first and chews the wood chips and the softwood strips nailed inside and this chewed-up wood lines the bottom of the box. The female goes in next and remains inside for longer and longer periods over the next few days. Meanwhile, the male sits on guard on the entrance perch or on the roof of the box.

On April 6th 2004, the female laid her first egg, followed by the second on the 9th and the third egg on the 12th. Only the first egg was fertile. It was put in an incubator on the fifth day. It hatched on May 3rd but the chick died two days later. It is possible that it died as the result of me overfilling its crop.

After this disappointment, we had to wait until the 2005 season to fulfil our dream. The same box was used by the birds under identical conditions. The first egg was laid on April 24th, the second on the 26th and the third egg on the 29th. I had witnessed a coupling during the previous week.

The female incubated perfectly and carefully turned the eggs. The first few days she did not leave the nest-box but later went out at around 10.00am (10.00hrs) and 6.00pm (18.00hrs) for a few minutes, always protected by the male which became very aggressive when he saw a human being.

Apart from that, she brooded the eggs while the male guarded the entrance to the nest and went down to feed her and then settled beside her. He often remained there alongside her for a long time before leaving the nest. The male went down into the nest-box head first, whereas the female entered the box backwards and was careful to position her feet well away from the eggs.

To avoid any risk, we regretfully removed the three eggs from this wonderful couple on May 12th while the female was momentarily away. All three were fertile with very mobile embryos of a size consistent with their age. The nest was perfectly clean with no trace of faeces on the wood chips.

Description of the eggs

The first egg, laid April 24th, measured 44.55mm x 32.57mm and was

23.01 cubic cm in volume. It weighed 20.9lg on May 15th and 20.62g on May l7th, the daily weight loss being 0.14g. We can infer an initial weight of 23.85g which indicates a normal density of 1.03 on the day it was laid. On the 21st day, the density was 0.90.

The second egg, laid April 26th, measured 40.96mm x 32.19mm and was 22.31 cubic cm in volume. The density was 0.94 on the 21st day and it weighed 21.29g.

The third egg, laid April 29th, measured 40.96mm x 33.24mm and was 23.08 cubic cm in volume. On the 21st day, it weighed 21.08g and its density was 0.91.

The brood of *A. guildingii* eggs measured 44.55mm x 32.57mm, 40.96mm x 32.19mm and 40.96mm x 33.24mm, thus giving an average of 41.91mm x 32.66mm. The three eggs were 23.01 cubic cm, 22.31 cubic cm and 23.08 cubic cm in volume, thus giving an average of 22.80 cubic cm.

Artificial incubation

They were installed in a high precision electronic incubator set at a temperature of 37.3°C (99.1°F) and 50% humidity. They were turned eight times a day at irregular intervals. Several times a day they were checked visually and the pulse was taken with an infrared electrocardiogram.

Hatching of the first chick

The internal pipping of this egg, laid on the morning of April 24th, started on May 17th at 4.00pm (16.00hrs). A very faint, external pipping appeared on May 18th in the form of a series of three parallel superficial cracks 5mm in length. The egg remained immobile.

On May 19th at 4.00am (04.00hrs) the shell looked the same. At 8.00am (08.00hrs) however a minute chip of shell about 1mm long had lifted up at the end of one of the cracks. There was no further change until midnight (24. 00hrs). The egg remained immobile but the chick was alive and showed a stable pulse rate of 260 beats per second.

On May 20th at 4.00am (04.00hrs) the egg looked similar in appearance but the chick's heartbeat had slowed and become irregular. Therefore I took the decision to open the shell and the membrane which had still not been broken by the chick's beak. Several of the blood vessels remained full of blood, which became more obvious after the membrane was moistened with lukewarm serum. The chick opened its beak and breathed. The temperature of the incubator was left at 37.3°C (99.l°F) but the humidity was raised to 80%.

At 11.00am (11.00hrs) the hole in the shell and the membrane were enlarged, as the blood vessels were by then practically empty. At 11.45am (11.45hrs) the chick chirped softly and was then carefully extracted from the shell. A small quantity of meconium (the dark green mucoid material that forms the first faeces of the newly-hatched chick) had been passed by the chick in the egg and confirmed that the timing of the extraction was right. The humidity was raised to 90% and the umbilical cord was severed after having been pinched but without the use of a ligature.

The chick hatched (with our assistance) at noon (12.00hrs) on the 26th day and weighed 15.78g. It remained in the incubator set at 37.2°C (99°F) and 50% humidity for three days. The chick was fed for the first time in the late afternoon. An eye dropper with a latex tip was used and the powder was diluted in six times its volume of warm water. On the second day, May 21st, the chick was fed every two hours during the day and every three hours at night. The following day, May 22nd, a small amount of food was regurgitated at 2.00am (02.00hrs), otherwise it was a normal day.

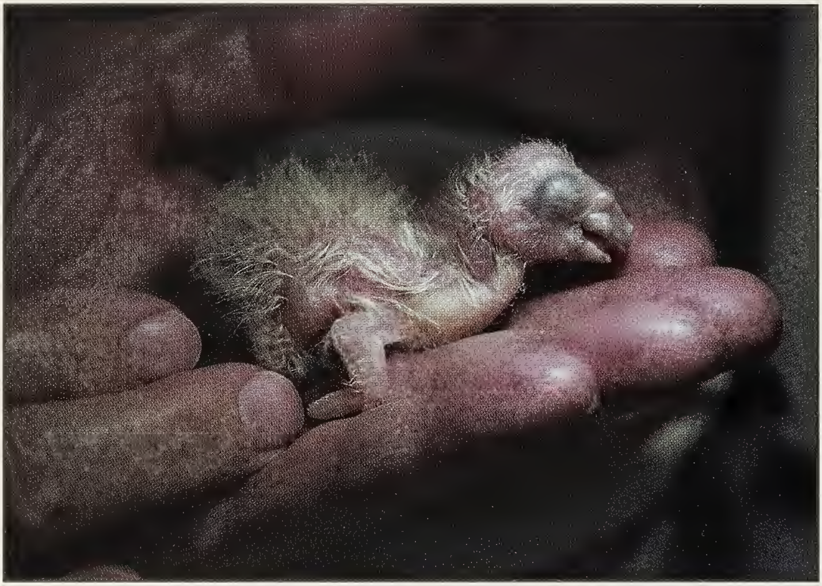
May 23rd at 4.00am (04.00hrs) the chick was on its back, it was restless and its abdomen was bloated. It was breathing irregularly and ate very little. It had not passed any droppings. Despite being wedged with tissue paper in an adapted nest, it kept turning onto its back. At the end of the day, it produced a green, fairly compact dropping. The food was made thinner (more liquid) and the temperature was reduced to 36°C (96.8°F) and the humidity was raised to 65%. The chick remained on its back and was very dehydrated. Treatment was started using human medicines.

May 24th the chick was eating better and turning over less often. May 28th there were obvious signs of amelioration. The rehydration treatment was stopped and the temperature was reduced to 35°C (95°F). A thicker mix of three parts water to one part powder was given and the normal feeding pattern resumed.

I relate these events in the hope of showing that the chick would probably not have survived without human intervention during hatching and the dehydration incident. I am uncertain whether the parents would have helped very much, even if they can help with the hatching as some macaws do. I hope our nest cameras will provide us with more information on this subject this coming breeding season.

Hatching of the second chick

The hatching of the second egg, which was laid on April 26th, was very similar to the hatching of the first egg, described above, in that we had to intervene in order for the chick to hatch successfully. The internal pipping started on May 19th with a stable heartbeat of 260 pulsations per minute. A single external dot pip appeared on May 20th at 5.00pm (17.00hrs). The egg weighed 20.79g. The temperature was left at 37.3°C (99.1°F) and the humidity was raised to 80%. On May 22nd, the lack of progress and a slower and irregular pulse led us to open the shell and the membrane.



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St. Vincent Parrot chick at one day old.

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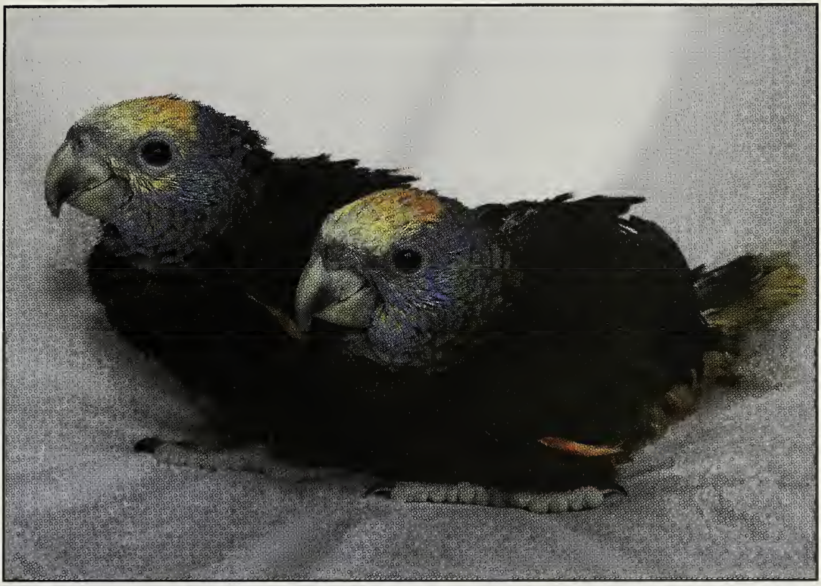
The author with St. Vincent Parrot chicks at 29 days old.



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Fifty days old.

A vascular membrane was found stuck to the chick's nostrils. It was removed with a damp pad and allowed the chick to breathe normally. It hatched (with our assistance) on May 22nd, the 26th day of incubation and weighed 16.60g. It developed normally without suffering any of the problems of its sibling and by the second day already weighed 20.87g.

Hatching of the third chick

The third egg was laid on April 29th. It developed in much the same way as the others, with the chick being incapable of hatching on its own. We extracted it from the egg on the 26th day. It weighed 16.15g. The umbilical cord was ligatured. It was well supplied with blood vessels but the membrane was not. The chick was of normal size, without anomalies but was weak and inanimate. It died 24 hours after hatching.

I suppose I could have been responsible for its death by acting too early but the presence of meconium in the shell suggested that the time of hatching had been reached or even passed.

Artificial rearing

The food is a commercially available powder which we diluted in hot or boiling water. During the first few days, the mix was watery in consistency, after which it was made progressively thicker as indicated by the manufacturer's instructions, so that by the third week it was almost half powder and half water. The mix was given to the chicks at a temperature of 37°C-38°C (98.6°F-100.4°F).

During the early days, a glass eye dropper with a small latex tip was used. The chicks were fed every two hours during the day and three times at night as a safety measure. The chicks took a few drops at first, then a ½ cubic cm, with the quantity being increased steadily. A syringe with a latex tip was then used. First a 5cc syringe was used, then a 10cc syringe during the sixth week. At that stage, the birds were fed five times a day and received 30 cubic cm - 40 cubic cm per meal. Starting on the third week, the night time feeds were cancelled, as long as the last meal was given late in the evening and the first meal was given early the next morning.

Healthy chicks grow fast and after the sixth week, it was sufficient to feed them just four times a day; then three times a day and finally, on the 10th week, twice a day. When they were between three and four months old there came the difficult weaning period and a complete change of food.

Despite some interest in solid food, the chicks still begged to be fed with a syringe. It is probably a psychological issue for the person who is rearing them, as at this stage they should actually be losing weight in preparation for starting to fly. To alleviate this problem, I suggest continuing to give the birds the same quantity of food twice a day, but diluted to half its normal consistency, so that the birds feel fulfilled and are kept hydrated.

As they discover new foods, such as almonds, apple, banana, carrots, germinated sunflower seeds, berries and salad items, their curiosity must be encouraged. It is difficult at first because they can only grasp their food and do not yet know how to use their feet to transfer the food to their beak. Little by little, one must continue to act like their parents and present and hold edible items of food for them.

They will eventually start swallowing small pieces of fruit, pistachios, peanuts, pyracantha berries and biscuit. It is difficult to get them to accept parrot pellets but they love green beans held for them so that they can split open the pods and eat the beans.

It was with almonds and green beans that we finally persuaded our birds to start feeding themselves, before going on to accept the great variety of food we now give them each day.

Description of the chicks and their development

On hatching, the chicks' bodies were pink and were covered with sparse white down. Progressively, the down became grey in irregular patterns where the feathers would grow later. The eyes opened one after the other at two-day intervals, starting on the15th day. They were black.

As early as the third week, sheaths of small black feathers started to appear on the chest and the chicks developed a white crown, made up of many tiny feathers. Soon afterwards the posterior edge of the crown took on a golden yellow tint. After a month, the chest sheaths started to sprout little tufts of feather which at first appeared to be black but soon turned to a beautiful deep emerald green. The tail was also growing and the quills were 2cm ($^3/_4$in) long.

One of the birds had the skin of its nostrils flesh coloured and had a pink tongue with a black tip, whereas the other bird had black nostrils and a black tongue. The first bird had a horizontal line of yellow feathers below the eyes, which the second bird lacked. The rest of the body was covered in down which became a darker grey.

Our birds grew very quickly and by the fifth week weighed 500g, which is about twice the weight of a normal Amazon. At two and a half months, the birds were 50cm (19$^3/_4$in) tall. They had almost reached their final dimensions, except for the remiges and retrices (the main wing and tail feathers) which were still growing.

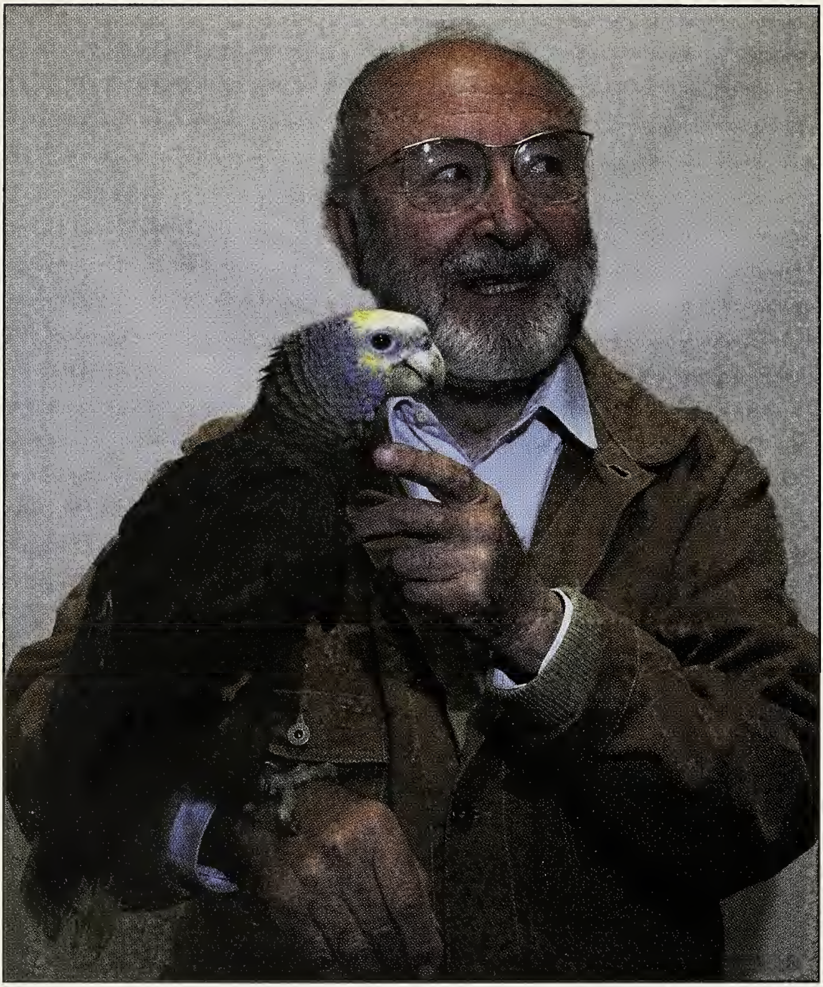
The colours, such as the white and yellow of the cap, the blue of the cheeks and neck, the bright electric blue of the remiges with orange in the centre and the buttercup yellow of the tip of the tail, already were as magnificent as those of the adult birds. The surface of the wings, which was green originally, got a gold tint. The chest and back were still much darker than those of the adult birds. The eyes, which were completely black the first month, remained the same around the iris, but the periphery was pale pink. The toes, which were pale in the case of one bird and pink in the case of the other, in both birds became grey and very large. The large golden green feathers of the thighs completely covered the tarsometatarsus.

The birds' large wingspan meant that their flight quickly improved.

Behaviour

On hatching, each chick was placed separately in a round plastic container and held in a semi-vertical position with tissue paper. When their eyes opened, we put the chicks together, to their obvious delight. Necks entwined, they stayed together without any rivalry. They became good friends and at six weeks of age grabbed each others' beaks and made crooning noises and fake feeding actions.

To rear such rare and precious birds requires much care and hard work. I took care of them from the moment they hatched and I have been rewarded for my efforts by their mutual affection. They each, of course, have a name and when called, even when they are far away, come to perch on my hand. They also climb onto my head and search my pockets and extract keys, paper and pens, which they were fully able to hold from the age of three months. They are calm and trusting, as are most adults. Pressed against my chest, with their head hidden beneath my chin, they still make baby noises.



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The author with young St. Vincent Parrot at 134 days old.

When they flew away, enjoying their new found mobility, they could at only 10 weeks old, already call as loud as the adults.

They are intelligent creatures and each is different in character. The one with the yellow cheeks is calm and gentle in its movements even when eating. The other is livelier and somewhat grouchy but is not aggressive even when I clean its beak with a wet sponge. I think they are probably a male and a female.

I acknowledge the great happiness of having been granted the complete trust of these two wonderful parrots who now share part of my life.

I can already hear the criticism which is bound to come from ornithologists who will reproach me for having hand-reared such rare birds, on the grounds that they will not breed successfully later on. I can only answer that they might not exist at all had it no been for our help and that, contrary to what seems to be the accepted wisdom, I have during my long career as an aviculturist often obtained some wonderful offspring, and sometimes some very wild offspring, from hand-reared parrots. I would also add that contrary to popular belief, I have often seen parrot siblings become partners, even when there were many other individuals from which they could have chosen.

It, of course, remains clear that in such circumstances, healthy offspring can only be obtained from individuals without genetic anomalies, recessive or dominant.

We can only hope to be as successful this year as we were last year, so that we can again modestly contribute to the survival of this exceptional parrot, which is the most beautiful of the last four large Amazons surviving in the Caribbean.

Dr Henry Quinque's account of breeding the St Vincent Parrot Amazona guildingii at the Conservatoire des Animaux en Voie d'Extinction, Le Mesnil Aubry, north of Paris, was translated from French to English by Gregory Guida, who also took the photographs.

AVICULTURAL MAGAZINE BACK ISSUES

The society has a large stock of back issues mostly from 1935 onwards but there are also some earlier issues still available. They are priced £3.00 each (including p&p). Please check availability before placing an order. Overseas members may be able to pay by credit card through a Paypal invoice, but this service is not available in all countries. All enquiries should be addressed to: P. Boulden, Hon. Secretary/Treasurer, Avicultural Society, Arcadia, The Mounts, East Allington, Totnes, Devon TQ9 7JQ, UK or E-mail:admin@avisoc.co.uk

HORNBILLS IN THAILAND - 2005

Through the Hornbill Family Adoption Project of the Hornbill Research Foundation, the Avicultural Society in 2005 again adopted a pair of Rhinoceros Hornbills *Buceros rhinoceros* and a pair of Great Hornbills *B. bicornis* in Thailand.

Rhinoceros Hornbill.

This is the project in which villagers who previously earned extra money by taking hornbill nestlings and selling them, are now paid to protect the nests and collect data on the birds' breeding biology and ecology.

There follows details of the nesting of the society's adopted pairs of hornbills in 2005, details of main foods brought to the nests by these two species and a summary of hornbill nesting in 2005 at Khao Yai National Park, Huai Kha Khaeng Wildlife Sanctuary and Budo Sungai-Padi National Park.

Species of hornbill: Rhinoceros Hornbill *Buceros rhinoceros*
Location of nest: Budo Mountain (part of Budo Sungai-Padi National Park), Ruso District, Narathiwat Province, Thailand
Nesting data:
Female imprisoned in nest: March 8th 2005
Female emerged: May 27th 2005
Chick fledged: July 3rd 2005
Type of parental care: Biparental care (female joined her mate to feed the chick)
Period of data collection: March 8th-July 3rd 2005
Breeding status: This nest was successful in fledging one chick
Nest tree data:
Villager responsible for the nest: Mr Asae Jaroo/Tapoh Group
Year nest was found: 2000
Species of nest tree: *Shorea leprosula*
Diameter of tree at breast height: 99cm (approx. 3ft 3in)
Height of nest tree: 50m (approx. 164ft)
Coordinate (UTM): No data
Altitude above sea level: 410m (approx. 1,350ft)
Slope of nest tree: 10%
Diameter at nest height: 97cm (approx. 3ft 2in)
Height of nest above ground: 6m (approx. 20ft)
Size of nest entrance: 20cm wide x 15cm long (approx. 8in wide x 6in long)
Direction of nest entrance: 60° (ENE)

Species of Hornbill: Great Hornbill *Buceros bicornis*
Location of nest: Budo Mountain (part of Budo Sungai-Padi National Park), Raman District, Yala Province,Thailand
Nesting data:
Female imprisoned in nest: February 24th 2005
Female emerged: May 17th 2005
Chick fledged: June 12th 2005
Type of parental care: Biparental care (female joined her mate to feed the chick)
Period of data collection: February 24th-June 12th 2005
Breeding status: This nest was successful in fledging one chick
Nest tree data:
Villager responsible for nest: Mr Haseng Kariya/Jakoa Group
Year nest was found: 2004
Species of nest tree: *Syzygium* sp.
Diameter of tree at breast height: 700cm (approx 23ft)
Height of nest tree: 30m (approx 102ft)
Coordinate (UTM): No data
Altitude above sea level: 480m (approx. 1,575ft)
Slope of nest tree: 4%
Diameter at nest height: 150cm (approx. 5ft)
Height of nest above ground: 20m (approx. 65ft)
Size of nest entrance: No data
Direction of nest entrance: 123° (SE)

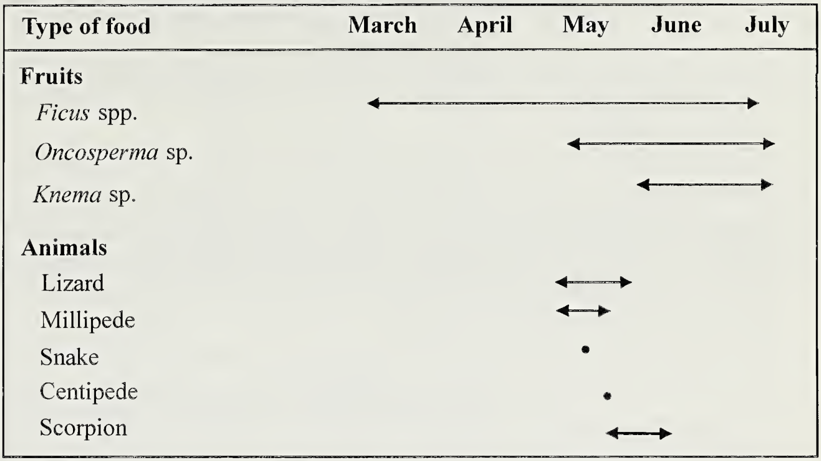
Food brought to the nest by the male Rhinoceros Hornbill.

Fruit	**Average feeding frequency/day**	**Average number/day**	**Average weight(g)/day**
Ficus spp. (size Ø < 1 cm)	1.0	4.0	3.0
Ficus spp. (size Ø 1-2 cm)	1.0	39.0	462.0
Ficus spp. (size Ø > 2 cm)	0.4	3.4	52.0
Ficus sp.	0.7	4.0	64.0
Knema sp.	0.4	4.0	4.1
Oncosperma horridum	0.4	3.0	20.4
Animal			
Millipede	0.04	0.2	-
Lizard	0.04	0.2	-
Centipede	0.04	0.04	-
Snake	0.04	0.04	-
Scorpion	0.04	0.1	-

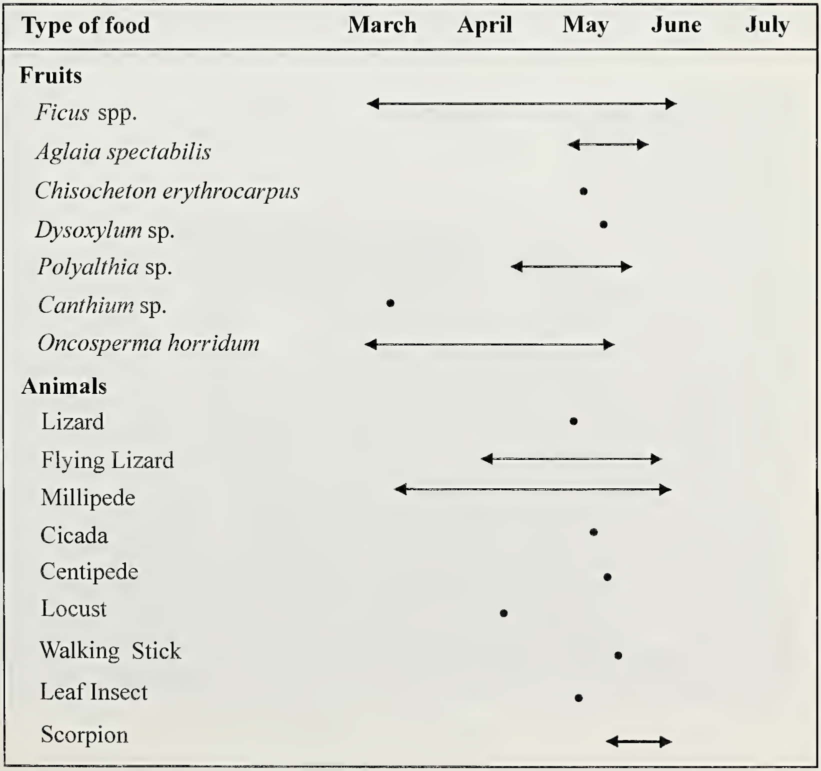
Food brought to the nest by the male Great Hornbill.

Fruit	**Average feeding frequency/day**	**Average weight(g) /day**	**Average number/day**
Ficus spp. (size Ø 1-2 cm)	3.0	35.0	414.0
Ficus spp. (size > 2 cm)	1.0	15.0	228.0
Aglaia spectabilis	0.6	2.0	34.0
Chisocheton erythrocarpus	0.4	0.4	2.3
Dysoxylum sp.	0.7	0.7	3.0
Polyalthia sp.	0.4	2.0	13.0
Oncosperma horridum	0.7	4.0	-
Canthium sp.	0.6	1.0	23.0
Animal			
Millipede	0.1	1.0	-
Centipede	0.1	0.1	-
Lizard	0.1	0.1	-
Scorpion	0.1	0.2	-
Locust	0.1	0.1	-
Leaf Insect	0.1	0.1	-
Cicada	0.1	0.1	-
Flying Lizard	0.1	0.3	-
Walking Stick	0.1	0.1	-

Duration of main foods which Rhinoceros Hornbill brought to nest during the 2005 breeding season at Budo Sungai-Padi National Park.



Duration of main foods which Great Hornbill brought to nest during the 2005 breeding season at Budo Sungai-Padi National Park.



Summary of hornbill nesting in 2005
Khao Yai National Park

	No. nests	Female imprisoned	Successes	Failures	No data
Great Hornbill	38	33	20	13	0
Wreathed Hornbill	18	16	16	0	0
White-throated Brown Hornbill	19	17	17	0	0
Oriental Pied Hornbill	51	32	31	1	0
Total	126	98	84	14	0

Huai Kha Khaeng Wildlife Sanctuary

	No. nests	Female imprisoned	Successes	Failures	No data
Great Hornbill	9	6	3	2	1
Rufous-necked Hornbill	11	2	1	0	1
Plain-pouched Hornbill	8	3	3	0	0
Tickell's Brown Hornbill	10	6	2	1	3
Oriental Pied Hornbill	8	2	2	0	0
Total	46	19	11	3	5

Budo Sungai-Padi National Park

	No. nests	Female imprisoned	Successes	Failures	No data
Great Hornbill	62	26	21	3	0
Rhinoceros Hornbill	46	13	11	2	0
Helmeted Hornbill	13	3	3	0	0
Wreathed Hornbill	16	9	8	1	0
Bushy-crested Hornbill	15	3	3	0	0
White-crowned Hornbill	8	0	0	0	0
Total	160	53	46	6	0

Dr Pilai Poonswad, Secretary-General of the Hornbill Research Foundation, has written to thank the society for its support in helping conserve hornbills in Thailand. It is an ongoing study and the foundation continues to collect hornbill data at the above areas and needs and welcomes the Avicultural Society's continued support. This we have given by again this year adopting a pair of Rhinoceros Hornbills and a pair of Great Hornbills.

BREEDING THE GREEN-NAPED LORIKEET
Trichoglossus haematodus haematodus
IN A MIXED-SPECIES EXHIBIT AT OREGON ZOO

by Rick Yazzolino, Shawn St. Michael and Charlie Rutkowski

Oregon Zoo's lorikeet exhibit houses 84 lories of 10 different species. This multi-species flock environment presented a number of problems, which needed to be overcome before a successful breeding programme could be developed. We believe that many of the techniques used here can be incorporated into other programmes and for other species to help improve breeding success.

The lorikeet exhibit was opened in 1999. It consists of an outside walk-through aviary and an off-exhibit indoor holding area. The L-shaped aviary measures 75ft and 50ft (22.8m and 15.2m) at the sides and is framed by 20ft (6m) tall fibreglass posts, draped with wire mesh which forms the walls and roof. A covered walkway contains infrared heaters to provide supplementary heat in inclement weather. A pool is provided to give the birds the opportunity to bathe. The indoor area has a large 16ft x 8ft x 9ft (4.8m x 2.4m x 2.7m) flight and two smaller holding cages. Each holding area can be connected by opening a small hatchway between them.

The covered walkway.

The feeding regime consisted of Cuttlefish Nectar ($^1/_4$ cup powder to 6 cups water) in the morning and afternoon, with fruit put out in the middle of the day. In addition, Bird of Paradise pellets are available ad-lib. The general public is allowed to feed the birds small cups of apple juice. The feeding of fruit in the exhibit proved problematic. The birds left as many little pieces of fruit as they ate and these attracted rats. To reduce this problem all feeding except that by the public was moved indoors.

In 2000 nest-boxes were placed in the exhibit. The boxes measure 10in x 9in x 10in (approx. 25cm x 23cm x 25cm) with a 2in (5cm) diameter hole. The floor of the nest-boxes was covered with fine wood chips. The birds took to the boxes and produced nestlings. However, several problems occurred. The nest-boxes were checked on a regular basis and the parents became aggressive during these inspections. Also, when the nestlings fledged they were mobbed by some of the more aggressive birds and this resulted in the death of some of the fledglings. To help protect them one particularly aggressive bird was removed from the flock. Another problem was that the fledglings were mobbed by other birds whenever they ‘food called’. These problems resulted in a low 25% survival rate for fledglings.

Several steps were taken to resolve these problems. The first was to train the birds to come into the holding area. Initial training consisted of blowing a whistle when feeding the birds fresh nectar. The birds were given

The doorway into the holding area.

a few minutes to come in, after which the door to the holding area was closed. They quickly learnt to do this, in fact after a short time the whistle was abandoned, as the birds come in as soon as they hear the sound of the blender. This allows us to check and monitor all the nest-boxes. There are two caveats to this, the first being that if a bird does not come in and there are nestlings in boxes, the birds are shut in for only a few minutes. This reduces the amount of time birds not shut in have to get up courage to go into these nest-boxes. The second caveat is that when new birds are put out in the exhibit, the door is left open and nectar is placed on the ledge, to give the new birds an opportunity to find the nectar and learn to find their way back into the holding area.

By checking and monitoring the nest-boxes, we know exactly when the eggs were laid, when they hatched and when the nestlings are about to fledge. We can also monitor other problems such as ‘over grooming’. If the adults break or pull out blood feathers when doing this, we know that the nestlings will have a more difficult time fledging.

Another hurdle we had to overcome was developing protocols for hand-rearing the nestlings. They are raised by their parents up to about day 50 or just prior to fledging. They are then brought inside and placed in a Brinsea TLC 4 brooder set at 28°C (82.4°F). As soon as possible the chicks have to be taught how to feed themselves. Chicks receive nourishment from their parents by holding their head up. We have to teach them to eat with their

Brinsea TLC 4 brooder.

head down. We do this by holding the syringe above the chicks' heads and dribbling nectar down, which initiates the 'gobbling' response. The syringe is then moved down towards the bowl of nectar. By repeatedly doing this the chicks quickly learn to feed themselves.

We use a syringe to start teaching the chick to feed itself and work towards getting it to feed from a bowl.

The chicks will eat much better if the nectar is warmed to about 32.2°C (90°F). The nectar should not be allowed to sit for more than three hours, as after this it begins to deteriorate. Removing the nectar after three hours and replacing it with fresh nectar will also help prevent 'sour crop'. If the chicks are removed from the nest before day 50, Exact® is added to their nectar. If this is given to older chicks in small amounts, we have found that it has a tendency to cause loose stools and if it is fed exclusively, it can bind them up.

The chicks are first introduced to fruit by blending it into the nectar. Then later fruit is placed in the flight. They are also provided with Bird of Paradise pellets and fresh water. At about day 50, the chicks are moved to one of the indoor flights. Here they have the opportunity to climb on the wire mesh and on the branches. They also get to bond with chicks from other nests and start to learn to fly. To further strengthen their breast muscles, we give the chicks flight training. This is done by getting all of the other birds to go out of the indoor flight and then closing the door. The chicks are then placed on the floor of the flight and are encouraged to fly. Placing them on the floor ensures that we know whether or not they are strong enough to fly and eliminates the possibility of injury that could occur were they encouraged to take off from a perch or were just tossed into the air.

Eventually they are encouraged to fly around the indoor flight. To do this we use a feather duster. Once the birds are flying strongly they are introduced into the flock. Observers ensure that the birds get along well. In a number of instances we have seen the parent birds go back to feeding their offspring.

The steps described above have in the past three years enabled the flock of lorikeets here at Oregon Zoo to go from a 25% success rate to a 90%-100% success rate in the number of young raised. We believe that our ability to monitor the eggs and chicks, teaching them to feed themselves and, most importantly, giving them flight training, have contributed greatly to this success.

The importance of the fledglings being able to escape from the more aggressive birds in the flock cannot be understated. We believe that the steps we have taken can also be undertaken at other facilities where birds are housed in flock situations and can also be applied to other species.

Charlie Rutkowski can be contacted at: 4550 NW 186th Ave., Portland, Oregon 97229-2044, USA. Tel:(503) 645-9504. You can visit the Oregon Zoo website at:www.oregonzoo.org

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MARVIN L. JONES 1928-2006

Josef Lindholm has reported the death in California of Marvin L. Jones. Marvin's, A History of the Genus *Picathartes* in Captivity, 1948-2002, was published in the *Avicultural Magazine* Vol.109, No.3, pp.125-129, Vol.109, No.4, pp.167-173 (2003) & Vol.110, No.1, pp.9-16 (2004). It was published, Josef pointed out, 50 years after Marvin's first article, Birds of the Cologne Zoological Gardens, appeared in the *Avicultural Magazine* Vol.60, No.1, pp.26-30 (1954), when Marvin was stationed in Germany with the US Army.

NEWS & VIEWS

HORNBILLS OF AFRICA

A new aviary called Hornbills of Africa, has been opened at the World of Birds Wildlife Sanctuary, Hout Bay, Cape Town, the continent's largest bird park. The aviary houses a number of species of African hornbills, ranging from several of the smaller *Tockus* spp. up to larger hornbills such as the Silvery-cheeked *Bycanistes brevis*, Black-and-white-casqued *B. subcylindricus* and the Black-casqued Wattled *Ceratogymna atrata.*

Nine nooks with tables and chairs are spaced throughout the enclosure, at which visitors can sit and relax and watch for the birds moving among the dense foliage above. Tea, coffee and cold drinks and sandwiches can be obtained at a nearby cafeteria and taken back to the tables and it is hoped that the hornbills will eventually become trusting enough to come down to them in search of titbits.

The World of Birds has also announced that it has lodged an application with Cape Town City Council to lease and administer an adjoining public open space, which has a large dam. It has many rescued gulls, Egyptian Geese *Alopochen aegyptiacus*, Hadada Ibis *Bostrychia hagedash* and other waterbirds and desperately needs a release site along with a safe sanctuary for permanently handicapped birds. It is envisioned that it will eventually be populated by pelicans, cranes, storks, herons, egrets, ibises, spoonbills, and ducks and geese.

* * *

NEARLY A HUNDRED IN CAPTIVITY

"There are now believed to be nearly 100 Spix's Macaws *Cyanopsitta spixii* living in captivity", wrote Avicultural Society member Tony Pittman in a letter in a letter published in *Cage & Aviary Birds*, March 16th, p.6.

One was hatched on January 17th at Loro Parque, Tenerife, where two Spix's Macaws were hatched in 2004. The egg laid on Christmas Day 2005, was unexpected and outside the species' usual breeding period. The young macaw, a female, will be paired with a young male hatched in 2004, which with its parents, was imported into Germany from Switzerland last year.

In early May 2005, two young were hatched at Sheikh Saoud Al-Thani's Al Wabra Wildlife Preservation in Qatar. Sadly, later there was an outbreak of Proventricular Dilatation Disease (PDD) amongst the macaws kept there, which resulted in at least three fatalities. In September, 15 Spix's Macaws acquired from Roland Messer in Switzerland, were transferred from that country to Al Wabra Wildlife Preservation in Qatar. Another Spix's Macaw, a female, was hatched there towards the end of October. If you would like to learn more and keep up to date with the latest developments regarding Spix's Macaw, Tony has a website: www.bluemacaws.org

SOUTH AFRICAN VULTURE UNIT

The De Wildt Vulture Unit (e-mail:vulture@dewildt.org.za) was established in 1990 to serve as a rehabilitation and holding facility for injured, poisoned and disabled vultures. The aim is to rehabilitate them to the point where they can be successfully released back into the wild. Birds that recover, but are no fit enough to be released, but can live good lives in captivity, are accommodated at the unit on a permanent basis. Some of these birds are utilised in the unit's educational and awareness programmes, aimed at farming communities, schools and bird clubs. The unit also goes into urban communities and out into rural communities to educate children about vulture conservation.The birds are also utilised in research programmes and are encouraged to breed in captivity.

* * *

COMMON IN SOUTHERN SOUTH AMERICA

The Wilson Journal of Ornithology (formerly *The Wilson Bulletin*) Vol.118, No.1, March 2006, includes a paper (pp.85-90) on the breeding biology of the Double-collared Seedeater *Sporophila caerulescens*. Mercival R. Francisco studied the reproductive biology of this common seedeater in south-east Brazil, where during seven breeding seasons between 1997-2003, 41 nests were studied. Nesting occurred from December-May and all nests contained two eggs, laid on consecutive days, with incubation commencing the morning after the female laid the second egg. Incubation and nestling periods were 12 days and 12-15 days, respectively. Only the female incubated the eggs.

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ENDANGERED CONURE

Chester Zoo is thought to be one of only two zoos in Europe keeping the Grey-breasted Conure *Pyrrhura griseipectus*, a Critically Endangered species endemic to north-east Brazil. This conure, only recently accorded species status, was previously regarded as a subspecies of the White-eared Conure *P. leucotis*.

After the zoo's pair of Red-billed Curassows *Crax blumenbachii* lost the chick from it first clutch earlier in 2005, the pair unexpectedly nested again later in the year and the egg was artificially incubated and the chick was reared by a domestic hen.

The zoo, which last year bred a spectacular 51 Java Sparrows *Padda oryzivora*, has established a breeding flock of these birds in its Dragons in Danger exhibit, home to its Komodo Dragons *Varanus komodoensis*.

AFRICAN HAPPENINGS

The latest *Bulletin of the African Bird Club* Vol.13, No. 1, March 2006, includes several records likely to be of interesting to aviculturists. Among them is the record of 23 Grey Parrots *Psittacus erithacus* seen on October 8th last year in the Kakamega Forest, western Kenya, 10 years after this species was thought to be extinct at that locality (p.102). Elsewhere (pp.84-85), Victor Mamonekene and Frédéric Lambert Bokanza-Paco report the sighting of Grey-necked Picathartes *Picathartes oreas* in Congo-Brazzaville, the first record for that country and the southernmost locality at which this species has been recorded.

There is also the first record of the Rose-coloured Starling *Sturnus roseus* for Ethiopia and sub-Saharan Africa (p.75). A single bird was seen on the ground with a group of Wattled Starlings *Creatophora cinerea*. Other records include the first Desert Eagle Owl *Bubo ascalaphus* for Burkina Faso (pp.78-79), the first record of the Blackcap *Sylvia atricapilla* in Mozambique (pp. 80-81) and the first sightings of Pink-backed Pelicans *Pelecanus rufescens* in Madagascar since 1960 (pp.86-87).

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THE FLAMINGO SPECIALIST GROUP (FSG)

This group was established in 1978 at Tour du Valat in France, under the leadership of Dr Alan Johnson, who coordinated the group until 2004. Currently, it is coordinated from the Wildfowl & Wetlands Trust at Slimbridge, here in the UK, as part of the IUCN-SSC/Wetlands International Waterbird Network.

The FSG is a global network of flamingo specialists (both scientists and non-scientists) concerned with the study, monitoring, management and conservation of the world's flamingos. Its role is to actively promote flamingo research and conservation worldwide by encouraging the exchange of information and cooperation amongst these specialists and those of other relevant organisations, particularly IUCN-SSC, Ramsar, WWF International and BirdLife International.

FSG members are working with both wild and captive flamingos. They are undertaking field surveys, tracking flamingo movements, studying their breeding biology and diseases, and are involved in data management. Further information about the FSG can be obtained from Dr Brooks Childress, Wildfowl & Wetlands Trust, Slimbridge, Glos. GL2 7BT, UK. Tel:+44 (0)1453 860437/Fax:+44 (0)1453 860437/E-mail: Brooks.Childress @wwt.org.uk

HAVEN OF TRANQUILITY

During the latter part of last year, Brian A. G. Hill - who is now back in Greece - visited Brazil and while in Belén, made frequent visits to the zoological-botanical garden, less than a ½-hour walk from where he was staying. It occupies only one block of the city, he wrote, but it is such a representative "jungly" last remnant of forest near the city centre, that not only offers some tranquility from the bustle and noise of the city, but also a most prestigious institution, Museu Emilio Goeldi, dating from about 1894. Brian provided the following list of the live birds exhibited there: Maguari Stork *Ciconia maguari*, Wood Stork *Mycteria americana*, Harpy Eagle *Harpia harpyja*, Snowy Egret *Egretta thula*, Great Egret *Ardea alba*, Scarlet Ibis *Eudocimus ruber*, Black-bellied Whistling Duck *Dendrocygna autumnalis*, White-faced Whistling Duck *D. viduata*, Rufescent Tiger Heron *Trigrisoma lineatum*, Striated Heron *Butorides striatus*, White-necked Heron *A. cocoi*, Buff-browed Chachalaca *Ortalis superciliaris*, Cock-of-the-Rock *Rupicola rupicola*, Sunbittern *Eurypyga helias*, Chestnut-fronted Macaw *Ara severa*, White-crested Guan *Penelope pileata*, Rusty-margined Guan *P. superciliaris*, Bare-faced Curassow *Crax fasciolata*, Ariel Toucan *Ramphastos vitellinus ariel* and White-throated Toucan *R. tucanus*.

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NEW AT WHIPSNADE

Whipsnade Wild Animal Park has received a pair of Sulawesi Tarictic Hornbills *Penelopides exarhatus sanfordi* from San Diego Wild Animal Park. Curator John Ellis describes the male hornbill as looking "stunning". Now that Whipsnade's two American Bald Eagles *Haliaeetus leucocephalus* are adult, they have been withdrawn from the bird shows and housed in a new 18ft (approx. 5.4m) high aviary in the Bird Garden, in which it is hoped the pair will breed.

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TOUCAN BREEDING CENTRE

A breeding centre to house 16 pairs of toucans, namely eight pairs of Toco Toucans *Ramphastos toco* and two pairs each of Channel-billed Toucans *R. v. vitellinus*, Red-billed or White-throated Toucans *R. tucanus*, Choco Toucans *R. brevis* and Plate-billed Mountain Toucans *Andigena laminirostris*, is being established at the Dutch Parrot Sanctuary, Oerle, the Netherlands.

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ESSEX SUCCESSES

Last year, Colchester Zoo, bred three Hamerkop *Scopus umbretta*. The trio hatched in early July and fledged in late August. Two pairs of Rüppell's Griffon Vultures *Gyps ruepellii* each reared a chick.

SAVING THE GOULDIAN

Mike Fidler, who with Tasmanian finch breeder Marcus Pollard, has set up the Save the Gouldian Fund - website:www.savethegouldian.org - is appealing to aviculturists to help save this iconic species. A few years ago, Mike retired and with his wife Elisabeth, moved from the UK to Australia, where in 2003, he gave A$600,000 (approx. £250,000 or US$450,000) to the Australian Wildlife Conservancy (AWC) to fund research on the Gouldian Finch *Erythrura gouldiae* in Mornington Wildlife Sanctuary, formerly Mornington Station, in northern Western Australia's Kimberley region. Mike is also funding University of New South Wales researchers and allowing them unfettered use of his state-of-the-art aviary facilities and the birds housed in them.

There are perhaps some 2,000 or so Gouldians living in small isolated groups in Western Australia and the Northern Territory, wrote Karen McGhee in an article entitled - The exquisite Gouldian Finch is one of the world's most prized caged birds. But can a multi-million dollar rescue mission save it in the wild? (*Australian Geographic*, July-September 2005, pp.39-45). They are, she wrote, fragmented remnants of a population that may once have numbered tens of thousands, or even hundreds of thousands, that inhabited vast areas of savannah woodland across tropical northern Australia.

Now, the biggest flocks found in the Northern Territory and the Kimberley, number little more than a few hundred birds. The decline was first noted about 30 years ago in Queensland, then in the Northern Territory and most recently in Western Australia. The Gouldian is just one of several species of native Australian birds fast disappearing due to habitat changes brought about, it is believed, by altered fire regimes and the spread of cattle.

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THE MAN WHO BRED THE GRENADA DOVE

Recently the society was contacted by a lady who has in her possession the Avicultural Society medal awarded to H. E. Bright for the first breeding of *Leptotila wellsi*. Could we, she wondered, tell her anything about H. E. Bright and the award of the medal?

It was reasonably easy to discover that H. E. Bright was Herbert Bright and that the medal was awarded to him in 1926 for the first breeding of the Grenada Dove. According to Dave Coles's *First Breeding Records of Birds Reared to Independence under Controlled Conditions in the United Kingdom*, Herbert Bright was also credited with the first breeding in the UK of the Namaqua Dove *Oena capensis* (1915), Gold-billed Saltator *Saltator aurantirostris* (1921), White-breasted or Jobi Ground Dove *Gallicolumba jobiensis* (1922), Marquesas Ground Dove *G. rubescens* and Soccoro or Grayson's Dove *Zenaida graysoni* (both 1926).

LATEST FBF BREEDING REGISTER

The Foreign Bird Federation *Register of Birds Bred in the UK under Controlled Conditions for the Years 2001-2004* has recently been published. It lists information provided by many (though not all) private aviculturists and public collections in the UK. It reveals that in 2004, 15,104 birds, of 494 species, were reported as having been bred. The figures for 2003 were roughly the same, while the number reported as having been bred in 2002 was higher (18,415) and, in 2001, was considerably lower (6,499).

This attractively presented, 32-page publication, the twenty-first in the series, dating back to 1984, provides a fascinating 'snapshot' of which species are currently being kept and bred in the UK - and how many. It is gratifying to see the growing number of species being bred, but of concern to see that others are it seems no longer being bred or are being bred in smaller numbers than before, e.g. no Elliot's *Syrmaticus ellioti*, Mikado *S. mikado* or Reeves's Pheasants *S. reevesii* are listed as having been bred in 2004. Twenty-eight species of pigeons and doves, including the Pheasant Pigeon *Otidiphaps nobilis aruensis* and Victoria Crowned Pigeon *Goura victoria*, were bred in 2004. Among the parrots, 110 Blue-and-Yellow Macaws *Ara ararauna* were bred in 2004 and 389 Grey Parrots *Psittacus e. erithacus* (compared with 523 in 2003 and 732 in 2002).

Eight Green Aracaris *Pterglossus viridis* were bred in 2004 and five in 2003. Turaco and hornbill numbers are lower than might be expected and the only barbet listed as having been bred during 2001-2004 is the Red-and-Yellow *Trachyphonus erythrocephalus*. Seven species of laughingthrushes *Garrulax* spp. were bred during the same period. Ten White-naped Yuhinas *Yuhina bakeri* and 10 Emerald Starlings *Lamprotornis iris* were bred in 2004, but just eight Bali Starlings *Leucopsar rothschildi* are listed for that year, against 17 the previous year.

Fifty Black-crowned Waxbills *Estrilda nonnula* are listed as having been bred in 2004, but just five Lavender Waxbills *E. caerulescens* and six Crimson-rumped Waxbills *E. rhodopygia*. Eight Western Bluebills *Spermophaga haematina* and eight Dybowski's Twinspots *Euschistospiza dybowskii* were bred in 2004. Australian finches and parrot finches *Erythrura* spp. generally bred well, as did all three silverbills *Lonchura* spp. and the Java Sparrow *Padda oryzivora*. However, only four Bronze-winged Mannikins *L. cucullata* are listed as having been bred in 2004 and no Timor Sparrows *P. fuscata*. Twenty-six Cuban Finches *Tiaris canora* were bred in 2004, 54 in 2003 and 52 the year before.

Copies, price £5 (post free), are available from the FBF Registrar, Reuben B. Girling, 11 Deramore Drive, Badger Hill, York YO10 5HW, UK. A few copies of earlier *Breeding Registers* remain available price £2. Cheques (sterling only) should be made payable to the Foreign Bird Federation.

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